

Claims:

1. (Currently Amended) A method of evaluating a threat posed by a substance, the method comprising the steps of:

- (a1) obtaining an image of a spectrograph of the substance with one or more remotely controllable sensing units comprising a mass spectrometer;
- (a2) transmitting the image of the spectrograph of the substance from the one or more remotely controllable sensing units to a control unit configured to automatically identify the substance by comparison analysis;
- (b) generating a report with the control unit, the report comprising the image of the substance and identification information regarding the substance as determined by the control unit;
- (c) uploading the report, via the control unit, to a secure remote server via a system chosen from the group consisting of a cell phone network and a satellite phone network;
- (d) notifying, via the control unit, at least some members of a hierarchy of authorities, including threat response authorities and evaluation authorities, of the report, wherein the evaluation authorities include a plurality of experts having knowledge relevant to making a high-level threat assessment; and
- (e) instructing at least some members of the hierarchy of authorities, via the control unit, to access the report on the remote server via a wide area network.

2. (Previously Presented) The method as set forth in claim 1, further including the step of providing the remote server with evaluation tools for automatically evaluating the report in light of other relevant data.

3. (Currently Amended) A method of evaluating a threat posed by a substance, the method comprising the steps of:

- (a1) airdropping one or more remotely controllable sensing units into an area containing a potentially hazardous substance, wherein the remotely controllable sensing units are spherical with an off-set center of gravity, such that the remotely controllable sensing units roll upon hitting ground to properly position various inlet and outlet ports associated with a sample collection mechanism of the remote sensing units for sample collection;
- (a1a2) obtaining an image of the substance with the one or more remotely controllable sensing units;
- (a2a3) transmitting the image of the substance from the one or more remotely controllable sensing units to a control unit configured to automatically detect and identify the substance and generate a corresponding report, ~~wherein the report includes a magnified image of the substance;~~
- (b) uploading the report, via the control unit, to a remote server via a system chosen from the group consisting of a cell phone network and a satellite phone network;
- (c) determining an actual geographic location of a remote sensing unit detecting the substance using a GPS device located on the remote sensing unit, communicating the actual geographic location to the control unit, and identifying an appropriate local reporting authority and an appropriate local reporting policy based upon the actual geographic location of the remote sensing unit detecting the substance;
- (d) notifying, via the control unit, the appropriate local reporting authority of the report in accordance with the appropriate local reporting policy;
- (e) determining, via the control unit, a hierarchy of threat evaluators, including the appropriate local reporting authority and a plurality of experts having knowledge relevant to making a high-level threat assessment; and
- (f) instructing at least some members of the hierarchy of threat evaluators to access the

report on the remote server via a wide area network.

4. (Previously Presented) The method as set forth in claim 3, further including the step of providing the remote server with evaluation tools for automatically evaluating the report in light of other relevant data

5. (Cancelled)

6. (Previously Presented) The method as set forth in claim 1, wherein the response authorities are chosen from the group consisting of local first responders, state agencies, state departments, regional agencies, regional departments, national departments, and national agencies.

7. (Previously Presented) The method as set forth in claim 1, wherein the evaluation authorities include experts on subjects chosen from the group consisting of medical issues relating to exposure to chemical substances, medical issues relating to exposure to biological substances, medical issues relating to exposure to radioactive substances, law, law enforcement, policy, doctrinal issues, historical cases, modeling, and simulation.

8. (Previously Presented) The method as set forth in claim 1, wherein the image of the substance is a microscope-magnified image.

9. (Previously Presented) The method as set forth in claim 1, further comprising collecting the substance with a sample examination cassette including:

- a roll of filter paper for receiving the substance;
- a roll of film providing an impermeable barrier for isolating the substance; and
- an archive spool for collecting the roll of filter paper and the roll of film.

10. (Canceled)

11. (Canceled)

12. (New) The method of claim 3, wherein the image of the substance is an image of a spectrograph of the substance, including data points obtained by a mass spectrometer, a gas chromatograph, or an ion mobility spectrometer of the remotely controllable sensing units.

13. (New) A method of evaluating a threat posed by a substance, the method comprising the steps of:

- (a1) airdropping one or more remotely controllable sensing units into an area containing a potentially hazardous substance, wherein the remotely controllable sensing units are positioned within an inflatable balloon-like structure which is inflated prior to airdropping the remotely controllable sensing units, wherein the inflated balloon-like structure is spherical, with an off-set center of gravity, such that the remotely controllable sensing units roll upon hitting ground to properly position various inlet and outlet ports associated with a sample collection mechanism of the remotely controllable sensing units for sample collection;
- (a2) obtaining an image of the substance with the one or more remotely controllable sensing units;
- (a3) transmitting the image of the substance from the one or more remotely controllable sensing units to a control unit configured to automatically detect and identify the substance and generate a corresponding report;
- (b) uploading the report, via the control unit, to a remote server via a system chosen from the group consisting of a cell phone network and a satellite phone network;
- (c) determining an actual geographic location of a remote sensing unit detecting the substance using a GPS device located on the remote sensing unit, communicating the

- actual geographic location to the control unit, and identifying an appropriate local reporting authority and an appropriate local reporting policy based upon the actual geographic location of the remote sensing unit detecting the substance;
- (d) notifying, via the control unit, the appropriate local reporting authority of the report in accordance with the appropriate local reporting policy;
 - (e) determining, via the control unit, a hierarchy of threat evaluators, including the appropriate local reporting authority and a plurality of experts having knowledge relevant to making a high-level threat assessment; and
 - (f) instructing at least some members of the hierarchy of threat evaluators to access the report on the remote server via a wide area network.

14. (New) The method of claim 13, wherein the image of the substance is an image of a spectrograph of the substance, including data points obtained by a mass spectrometer, a gas chromatograph, or an ion mobility spectrometer of the remotely controllable sensing units.